IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of)	
)	
YASUDA et al.)	**Art Unit 2100**
)	
Application Number: 10/767,778)	**Special Program**
)	**Examiner**
Filed: January 30, 2004)	**Brian L. Johnson**
)	
For: FILE REPLICATION METHOD FOR DISTRIBUTED)	
FILE SYSTEMS)	
)	
ATTORNEY DOCKET NO. NITT.0180)	

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RENEWED PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102(d) FOR ACCELERATION EXAMINATION

Sir:

This is in response to the Decision on Petition under MPEP 708.02 mailed on August 8, 2006 and the telephone conversation with the Examiner on October 10, 2006. The period of response for the Decision is set to expire on October 8, 2006. The Examiner indicated that adding "with execution of said file access request" into claim 4 in the Supplemental Preliminary Amendment and correcting all other issues mentioned in the Decision will be sufficient to have the Petition be granted.
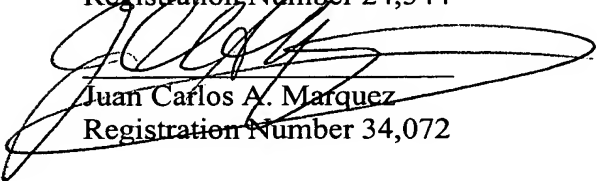
The Petition To Make Special Under 37 C.F.R. § 1.102(d) For Accelerated Examination was denied on the grounds that this application was deficient in that the detailed discussion of how the invention is patentable over the references was not fully recited in claim 4. The above-noted deficiencies have been addressed and corrected in the accompanying Supplemental Statements & Pre-examination Search Report and Supplemental Preliminary Amendment through the recitation of "with execution of said file access request" being added into claim 4 in the Supplemental Preliminary Amendment.

Substantive consideration of this Renewed Petition and of the claims of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is

invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

_____

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October 10, 2006

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SUPPLEMENTAL STATEMENTS & PRE-EXAMINATION SEARCH REPORT IN SUPPORT OF THE RENEWED PETITION TO MAKE SPECIAL

Sir:

Pursuant to 37 C.F.R. §§ 1.102 and MPEP 708.02 VIII, Applicant hereby submits that (1) all claims of record are directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, will make an election without traverse as a prerequisite to the grant of special status; (2) a pre-examination search has been conducted according to the following field of search; (3) copies of each reference deemed most closely related to the subject matter encompassed by the claims are enclosed; and (4) a detailed discussion of the references pointing out how the claimed subject matter is patentable over the references is also enclosed herewith.

FIELD OF THE SEARCH

Class	Subclasses
707	204
711	161
	162
	165
	170

The search was directed towards a storage system. In particular, the search was directed towards A file replication method for creating, in a distributed file system including a plurality

of network storage apparatus and a replication system each connected to a network wherein the replication system has a management table for managing attribute information of all files and directories in the network storage apparatus as a replication source, a partial copy of data stored in the network storage apparatus as the replication source in the network storage apparatus as a replication destination, said method comprising the steps of: preliminarily recording replication information for specifying a file as a target of replication in said replication system; receiving a file access request from a client; judging whether or not a replicating operation should be performed with execution of said file access request by using said management table and said replication information; and simultaneously transferring, if a result of said judgment is such that the replicating operation should be performed, said file access request to said network storage apparatus as the replication source and to said network storage apparatus as the replication destination. (See <u>Discussion of References</u> paragraph for claims indexed with reference numbers in the specification and highlighted portions of the claims.)

LIST OF RELEVANT REFERENCES

U.S. Patent Number	Inventors
6,408,298 B1	Van et al
6,883,073 B2	Arakawa et al.

U.S. Patent Application Publication No.	Inventor(s)
2005/0086384 A1	Ernst

Discussion of References:

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach or suggest the invention as claimed. The cited references, at a minimum, fail to teach or suggest in combination with each other the limitations recited in the claims. In particular, at least the features of (1) "judging whether or not a replicating operation should be performed with execution of said file access request by using said management table and said replication information" as now recited in claims 1 and 4, (2) "judging, by using said replication information, whether or not a replicating operation should be performed with execution of said file access request" as now recited in claim 9, and (3) "judging whether or not the file access target of said file access request should be replicated in said external file system

by using the unified management directory and the replication information" as now recited in claim 12, are patentably distinct from the cited prior art references.

The file replication method for creating, in a distributed file system 103 including a plurality of network storage apparatus and a replication system 104 each connected to a network 102, the replication system 104 having a management table for managing attribute information of all files and directories in a first network storage apparatus as a replication source, a partial copy of data stored in the first network storage apparatus into a second network storage apparatus as a replication destination of the invention (for example, the embodiment depicted in Figs. 1 & 5-6; pp. 12-15, 40-43), as now recited in claim 1, comprises the steps of: preliminarily recording replication information for specifying a file as a target of replication in said replication system 104; receiving a file access request from a client 100; judging whether or not a replicating operation should be performed with execution of said file access request by using said management table and said replication information; and simultaneously transferring, if a result of said judgment is such that the replicating operation should be performed, said file access request to said first network storage apparatus and to said second network storage apparatus. The method recited in claim 9 includes more details.

The invention as recited in claim 4 is directed to a replication system for implementing the method recited in claim 1. Claim 12 recites a similar system.

To the extent applicable to the present Petition, Applicants submit that although the distinguishing feature(s) may represent a substantial portion of the claimed invention, the claimed invention including said feature(s) and their inter-operation provides a novel disk array device.

US patent No. 6,408,298 B1 to **Van** et al was assigned to Microsoft Corp. and entitled as Methods and Systems for Copying and Moving Across Virtual Namespaces. **Van** moves a collection of resources from a source virtual namespace to a destination virtual namespace. For each directory the computer determines the file system path that corresponds to the virtual namespace (figure 2; column 2, lines 26-49). However, **Van** replicates in response to an appropriate request "as is," i.e., in a non-discriminated manner (Abstract), rather than exercising any independent judgments/determination regarding whether or not to replicate. As such, **Van** does not provide the (1)-(3) features as now recited in the independent claims.

US patent No. 6,883,073 B2 to **Arakawa** et al. was assigned to Hitachi, Ltd. and entitled as Virtualized Volume Snapshot Formation Method. **Arakawa** has a server 100 located on a SAN 600 and having a virtualized storage region, and a method for controlling replica formation, with a control device holding entire or partial correspondence information (figure 24;

column 20, lines 1-14). However, **Arakawa** does not replicates files in a "distributed file system (DFS)," which organizes file and directory services of individual servers into a global directory in such a way that remote data access is not location-specific but is identical from any client, and all files are accessible to all users of the global file system and organization is hierarchical and directory-based. In addition, **Arakawa**'s storage device 300 takes a snapshot on volume basis of a physical volume 400 (which constitutes a virtualized volume), or a partial region basis of the physical volume 400, *whenever* requested by the backup software on the host 200 (col. 19, lines 36-38; Fig. 24), rather than exercising any independent judgments/determination regarding whether or not to replicate. As such, **Arakawa** does not provide the (1)-(3) features as now recited in the independent claims.

US patent application publication No. 2005/0086384 A1 of **Ernst** was entitled as System and Method for Replicating, Integrating and Synchronizing Distributed Information. Ernst discloses partial replication in a distributed architecture, and shows a system that supports virtual file systems (figure 4; paragraphs 23 and 355). However, **Ernst**'s notes either hold a full copy of the exact same information 302 or a fraction 402 of the shared information as *whenever ordered* by a customer ([0105]; Fig. 6), rather than exercising any independent judgments/determination regarding whether or not to replicate. As such, **Ernst** does not provide the (1)-(3) features as now recited in the independent claims.
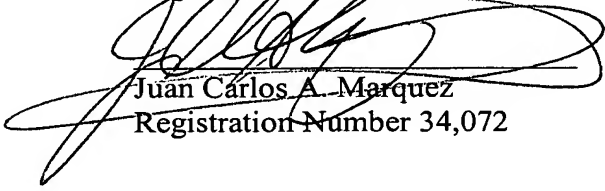

Conclusion

Therefore, since the cited references fail to teach or suggest (1) the feature recited in claims 1 and 4, (2) the feature recited in claim 9, and (3) the feature recited in claim 12 in combination with the other limitations recited in each of the independent claims, it is submitted that all of the claims are patentable over the cited references whether said references are taken individually or in combination with each other.

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable consideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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October 10, 2006

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